

What is claimed is:

- Sub 5
a. 1. A method for a gain control of a fiberoptic repeating system comprising:
a. 1.1 mixing from a master repeater a modulated MODEM signal of a predetermined level with a RF signal and transmitting the mixed signal through an optical cable;
a. 1.2 detecting at a slave repeater a modulated MODEM signal level from the mixed signal transmitted by the master repeater;
a. 1.3 comparing the detected modulated MODEM signal level with a reference level and obtaining a difference between the levels;
a. 1.4 and
a. 1.5 controlling a gain of an amplifier for the RF signal in the slave repeater based upon said obtained difference.

Sub 10
a. 2. A method of claim 1, wherein the modulated MODEM signal is detected by a controller of the slave repeater.

Sub 15
a. 3. A method of claim 1, wherein the reference level is the predetermined level unless the master repeater transmits a control signal of a base station.

Sub 20
a. 4. A method of claim 1, wherein controlling the gain of the amplifier to increase a level of the RF signal by the obtained difference.

5. A method for a fiberoptic repeating system comprising:
transmitting from a base station a first RF signal;
amplifying the first RF signal by a constant level through
an amplifier of a master repeater;

5 mixing a first modulated MODEM signal of a predetermined
level with the first amplified RF signal and transmitting the
mixed signal through an optical cable to a slave repeater;

10 receiving and separating the mixed signal into a second
modulated MODEM signal and a second RF signal, and detecting a
modulated MODEM signal level from the second modulated MODEM
signal;

15 comparing the detected modulated MODEM signal level with a
reference level and obtaining a difference between the levels;

20 controlling a gain of an amplifier for the RF signal in the
slave repeater based upon said obtained difference; and

amplifying the second RF signal according to the controlled
gain and transmitting the second amplified RF signal to a
terminal.

20 6. A method of claim 5, wherein the modulated MODEM signal
level is detected by a controller of the slave repeater.

7. A method of claim 5, wherein the reference level is the
predetermined level unless the master repeater transmits a

control signal of a base station.

Sub 8. A method of claim 5, wherein controlling the gain of the
a3> amplifier for the RF signal in the slave repeater to increase a
5 level of the second RF signal by the obtained difference.

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